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NASA TECH BRIEF

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Silver–Palladium Braze Alloy Recovered from Masking Materials

The problem:

To devise an economical method for recovering powdered silver–palladium braze alloy from an acrylic spray binder and rubber masking adhesive used in spray brazing.

The solution:

A recovery process involving agitation and dissolution of the masking materials in organic solvents and recovery of the suspended precious metal particles on a filter.

How it's done:

The metal-powder-coated masking materials are stripped from the brazed structure and immersed in a methylene chloride bath, which is then subjected to ultrasonic vibration. The resultant contaminated metal-powder sludge is removed from the bath and placed in a high-speed stirrer containing a toluene–methyl ethyl ketone mixture to dissolve the organic contaminants from the sludge. The suspended metal particles are separated from the resultant solution by filtration under vacuum, washed on the filter with fresh portions of the solvent mixture, and finally dried.

Note:

Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: B66-10631

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C., 20546.

Source: R. Cierniak, G. Colman, and F. Decarlo of
North American Aviation, Inc.
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Marshall Space Flight Center
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Category 03

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